

September 1, 1989

Dear Customer:

Our records indicate that you may be a generator of waste material that is subject to the "soft hammer" requirements of the current Federal Land Disposal Restrictions. Attached for your convenience is a copy of the ThermalKEM Restricted Waste Notification Form. A list of the wastes currently affected by these requirements is contained on that form. If you plan to ship one or more of these wastes to ThermalKEM for treatment, the Federal regulations stipulate that you must provide both of the following:

**Demonstration and Certification**

This document must be prepared and sent to your regional RCRA Administrator. A copy of the demonstration and certification must be sent to ThermalKEM with the initial shipment of the waste. The document should list all relevant waste codes and must include a list of facilities, facility officials contacted, addresses, telephone numbers and contact dates. An example demonstration form is attached.

**Shipment Certification**

Each shipment of the demonstrated waste(s) must include a certification statement that is signed and dated by an authorized representative of the generator. This statement is the same as the one contained in the original demonstration form (example attached; also see 40 CFR 268.8 (a), (2), (ii)). Note that only the certification statement, not the demonstration, is required for each subsequent shipment. For your convenience, the "soft hammer" certification is contained on the ThermalKEM Restricted Waste Notification Form and may be used to satisfy the requirement.

Finally, please note that the attached list of waste codes are those that are currently affected by the regulations. The list may change when the regulation is revised as expected on May 8, 1990.

If you have any questions regarding this information, please contact me at (803) 324-5310 or contact your ThermalKEM Sales Representative.

Thank you for your cooperation.

Sincerely,

*Dallas C. Robinson*

Dallas C. Robinson  
Compliance Director

268846



Generator Name: \_\_\_\_\_

Date: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone #: ( \_\_\_\_\_ ) \_\_\_\_\_

Contact: Name \_\_\_\_\_

Mr. \_\_\_\_\_

Regional Administrator  
United States Environmental Protection Agency

Region \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Dear Mr. \_\_\_\_\_:

**RE: "First Thirds and or Second Thirds" Landfill Ban Demonstration and Certification for Soft Hammer Wastes.**

This letter serves as the demonstration required in 40 CFR 268.8(a)(1).

(Name of Company) \_\_\_\_\_ (Address) \_\_\_\_\_  
generates the following soft hammer wastes and ships them to ThermalKEM, Inc., 2324 Vernesdale Road, P.O. Box 2664, Rock Hill, SC 29731-2664. The "soft hammer wastes" generated are:

\_\_\_\_\_  
(EPA Waste ID Codes)

This waste is to be thermally treated. This treatment will provide the greatest environmental benefit.

In the search for acceptable treatment facility for these materials, the following facilities have been contacted:

Facility #1: **ThermalKEM Inc.**  
2324 Vernesdale Road  
P.O. Box 2664  
Rock Hill, SC 29731-2664  
Contact: Dallas C. Robinson  
(803) 324-5310

\_\_\_\_\_  
(Facility #2)

\_\_\_\_\_  
(Facility #3)

"I CERTIFY UNDER PENALTY OF LAW THAT THE REQUIREMENTS OF 40 CFR 268.8(a)(1) HAVE BEEN MET AND THAT I HAVE CONTRACTED TO TREAT MY WASTE (OR WILL OTHERWISE PROVIDE TREATMENT) BY THE PRACTICALLY AVAILABLE TECHNOLOGY WHICH YIELDS THE GREATEST ENVIRONMENTAL BENEFIT, AS INDICATED IN MY DEMONSTRATION. I BELIEVE THAT THE INFORMATION SUBMITTED IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF IMPRISONMENT."

Sincerely,

Signature \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

## GENERATOR RESTRICTED WASTE NOTIFICATION LAND DISPOSAL RESTRICTIONS COMPLIANCE

This form meets generator restricted waste notification to ThermalKEM Inc. of Rock Hill, SC as required by 40 CFR Part 268.7. The notification statement under category V below is not required by law. However, we strongly request that you adhere to the intent. It has been written and included by ThermalKEM for the safety and benefit of our customers and our employees.

Generator Name/Location \_\_\_\_\_

EPA or State ID Number \_\_\_\_\_ Manifest Number \_\_\_\_\_

Waste Analysis Available? Yes \_\_\_\_\_ No \_\_\_\_\_. If yes, attach copy per 40 CFR Part 268.7 (a) (1) (iv).

**I. RESTRICTED WASTE NOTIFICATION** (Corresponding Treatment Standard(s)) Certain wastes have been restricted from land disposal effective June 8, 1989, but are treatable at ThermalKEM. Restricted wastes treatable at ThermalKEM are listed in the attached Tables I, II and the addendum to Table V. If your waste is classified as any of those listed in Tables I, II and the addendum to Table V, write the ST number(s) and waste code(s) below and check (✓) the following certification statement. Also circle the appropriate code(s) and treatment standard(s) in the attached tables.

ST Number \_\_\_\_\_ Code(s): \_\_\_\_\_  
ST Number \_\_\_\_\_ Code(s): \_\_\_\_\_

I notify that I personally examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this notification that the waste does not comply with the treatment standards specified in 40 CFR 268, Subpart D and all applicable prohibitions set forth in 40 CFR 268.32, 268.41, 268.43 or RCRA Section 3004(d). Therefore the waste must be treated by the appropriate regulatory treatment standard (to the appropriate treatment standard, if applicable) prior to land disposal.

**II. WASTE SPECIFIC PROHIBITIONS.** (California list wastes.) Additional notification is required under 40 CFR Part 268.32 (j) to state specific characteristics for which land disposal is prohibited. If your waste contains any of these constituents or meets any of these properties, please check below.

\_\_\_\_\_ 1) pH ≤ 2.0 \_\_\_\_\_ 2) PCB ≤ 50 ppm \_\_\_\_\_ 3) Halogenated organic carbon, (HOC's) ≥ 1000 mg/l

\_\_\_\_\_ 4) Liquids or any free liquids associated with any solid or sludge, containing the following metals or compounds of these metals:

_____ Arsenic (As) ≥ 500 mg/l	_____ Cadmium (Cd) ≥ 100 mg/l	_____ Chromium, (Cr VI) ≥ 500 mg/l
_____ Lead (Pb) ≥ 500 mg/l	_____ Free Cyanides ≥ 1000 mg/l	_____ Mercury (Hg) ≥ 20 mg/l
_____ Nickel (Ni) ≥ 134 mg/l	_____ Selenium (Se) ≥ 100 mg/l	_____ Thallium (Tl) ≥ 130 mg/l

ST Number \_\_\_\_\_ Code(s): \_\_\_\_\_  
ST Number \_\_\_\_\_ Code(s): \_\_\_\_\_

**III. SOFT HAMMER RESTRICTIONS** If your waste is one of the codes listed in Table III, write in the ST Number(s) and waste code(s) and check the following notification statement. Also circle the appropriate waste code(s) in the attached table.

ST Number \_\_\_\_\_ Code(s): \_\_\_\_\_  
ST Number \_\_\_\_\_ Code(s): \_\_\_\_\_

I certify under penalty of law that the requirements of 40 CFR 268.8 (a) (1) have been met and that I have contracted to treat my wastes (or will otherwise provide treatment) by the practically available technology which yields the greatest environmental benefit, as indicated in my demonstration. I believe that the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A copy of The Demonstration Letter to Environmental Protection Agency was sent to ThermalKEM with the first shipment ☐ Y ☐ N. If no please attach a copy to this form.

**IV. WASTE CODES SUBJECT TO INCINERATION** Incineration is the required treatment for certain wastes as of June 8, 1989. These wastes are listed in Table IV. If your waste is classified as any of those listed in Table IV, write in the ST Number(s) and the waste code(s) below and check (✓) the following notification statement.

ST Number \_\_\_\_\_ Code(s): \_\_\_\_\_  
ST Number \_\_\_\_\_ Code(s): \_\_\_\_\_

**V. UNRESTRICTED WASTE NOTIFICATION** If your waste does not fall into the categories listed above in Items I, II, III and IV, write in the ST Number(s) and the waste code(s) below and check the following notification statement.

ST Number \_\_\_\_\_ Code(s): \_\_\_\_\_  
ST Number \_\_\_\_\_ Code(s): \_\_\_\_\_

I notify that I personally have examined and am familiar with the waste through analysis and testing or through notification that the waste is not restricted as specified in 40 CFR 268, Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA 3004(d).

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name: \_\_\_\_\_ Title: \_\_\_\_\_

# TABLE I

## Treatment Standards For Land Banned Restricted Waste

This restricted waste category is banned from land disposal under 40 CFR Part 268.30, 268.33 and 268.34 and is subject to one or more treatment standards under 40 CFR Subpart D. Complete the information in Table I below by circling the appropriate waste code(s) and treatment standard(s).

Total Composition, mg/l	K001	K009	K010	K011	K013	K014	K016	K018	K019	K020	K022	K023	K024	K028	K029	K030	K037	K038	K040	K043	K046	K048	K049	K050	K051	K052	K062	K066	K087	K093	K094	K095	K096	K101	K102	K103	K104	K115	
1. 1,1,1,2-Tetrachloroethane														5.6																			5.6	5.6					
2. 1,1,1-Trichloroethane								6.0	6.0					6.0	6.0												0.044												
3. 1,1,2,2-Tetrachloroethane										5.6				5.6																			5.6	5.6					
4. 1,1,2-Trichloroethane														6.0																			6.0	6.0					
5. 1,1-Dichloroethane								6.0						6.0																									
6. 1,1-Dichloroethylene															6.0																								
7. 1,2-Dichlorobenzene																											0.49												
8. 1,2-Dichloroethane								6.0	6.0	6.0					6.0																								
9. 1,2-Dichloropropane																																							
10. 1,2,4-Trichlorobenzene									19							19																		19					
11. 1,2,4,5-Tetrachlorobenzene																14																							
12. 1,3-Dichlorobenzene																																		5.6					
13. 2,3-Dinitrophenol																																			5.6	5.6			
14. 2,4,5-Trichlorophenol																				8.2																			
15. 2,4,6-Trichlorophenol																				7.6																			
16. 2,4-Dichlorophenol																																							
17. 2,6-Dichlorophenol																																							
18. 2-Chloro-1,3-butadiene																																							
19. 3-Chloropropene																																							
20. Acenaphthalene																														3.4									
21. Acetone																												0.37											
22. Acetonitrile				1.8	1.8	1.8																																	
23. Acetophenone											19																												
24. Acrylamide				23	23	23																																	
25. Acrylonitrile				1.4	1.4	1.4																																	
26. Aniline																																				5.6	5.6		
27. Anthracene																																							
28. Benzene				0.03	0.03	0.03																														6.0	6.0		
29. Benzo(a)anthracene																																							
30. Benzo(a)pyrene																																							
31. Bis(2-chloroethyl)ether									5.6																														
32. Bis(2-ethylhexyl)phthalate																																							
33. Chlorobenzene									6.0																														
34. Chloroethane								6.0																															
35. Chloroform		6.0	6.0						6.0						6.0																								
36. Chrysene																																							
37. Cis-1,3-Dichloropropene																																							
38. Cyanide (amenable)																																							
39. Cyanides (total)				57	57	57																																	
40. Cyclohexanone																																							
41. Diethyl phthalate																																							
42. Dimethyl phthalate																																							
43. Di-n-butyl phthalate																																							
44. Di-n-octyl phthalate																																							
45. Disulfoton																	0.1																						
46. Ethyl Acetate																																							
47. Ethylbenzene																																							
48. Famphur																																							
49. Fluoranthene																																							
50. Hexachlorobenzene								28	28																						3.4								

[illegible]

[illegible]



# TABLE II

## F001, F002, F003, F004, F005 SOLVENT RESTRICTIONS

This restricted waste category is banned from land disposal under 40 CFR 268.30 and is subject to one or more treatment standards under 40 CFR Subpart D. Complete the information in Table II below by circling the appropriate waste.

Constituent	Concentration Standard In Extract, mg/l
1. Acetone .....	0.59
2. n-Butyl Alcohol .....	5.00
3. Carbon Disulfide .....	4.81
4. Carbon Tetrachloride .....	0.96
5. Chlorobenzene .....	0.05
6. Cresols (and cresylic acid) .....	0.75
7. Cyclohexanone .....	0.75
8. 1,2-Dichlorobenzene .....	0.125
9. Ethyl acetate .....	0.75

Constituent	Concentration Standard In Extract, mg/l
10 Ethylbenzene .....	0.053
11 Ethyl ether .....	0.75
12 Isobutanol .....	5.00
13 Methanol .....	0.75
14 Methylene chloride .....	0.96
15 Methyl ethyl ketone .....	0.75
16 Methyl isobutyl ketone .....	0.33
17 Nitrobenzene .....	0.125

Constituent	Concentration Standard In Extract, mg/l
18 Pyridine .....	0.33
19 Tetrachloroethylene .....	0.05
20 Toluene .....	0.33
21 1,1,1-Trichloroethane .....	0.41
22 1,1,2-Trichloro-1,2,2-Trifluoroethane .....	0.96
23 Trichloroethylene .....	0.091
24 Trichlorofluoromethane .....	0.96
25 Xylene .....	0.15



# TABLE III

## SOFT HAMMER WASTE

The following waste codes are subject to soft hammer provisions and are acceptable (based on sample review) to ThernaKEM. EPA has set treatment requirements. The following wastes are banned from land disposal effective August 8, 1988 and June 8, 1989. Complete the information below by circling the appropriate waste code.

Waste Code	Waste Description	Waste Code	Waste Description	Waste Code	Waste Description	Waste Code	Waste Description
<b>261.31 Wastes - Non-Specific Sources</b>							
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum	P014	Benzenethiol	U041	1-Chloro-2,3-epoxypropane	U138	Methane, iodo-
<b>261.32 Wastes - Specific Source</b>		P016	Bis-(chloromethyl) ether	*U043	Vinyl chloride	U140	Isobutyl alcohol (I,T)
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin	P018	Brucine	*U044	Chloroform	*U142	Kepone
K031	By-product salts generated in the production of MSMA and cacodylic acid	P020	Dinoseb	U046	Chloromethyl methyl ether	U143	Lasiocarpine
K035	Wastewater treatment sludges generated in the production of creosote	P026	1-(o-Chlorophenyl)thiourea	*U047	beta-Chloronaphthalene	U147	Maleic anhydride
K041	Wastewater treatment sludge from the production of toxaphene	P027	3-Chloropropionitrile	U049	4-Chloro-o-toluidine, hydrochloride	U149	Malononitrile
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T	*P037	Dieldrin	U050	Chrysene	U150	Melphalan
K069	Emmission control dust/sludge from secondary lead smelting	P039	Disulfoton	U051	Creosole	U154	Methanol
K073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.	P048	2,4-Dinitrophenol	U053	Crotonaldehyde	U155	Methapyrilene
K083	Distillation bottoms from aniline production	P049	2,4-Dithiobiuret	U057	Cyclohexanone (I)	U157	3-Methylcholanthrene
K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	*P050	Endosulfan	U059	Daunomycin	*U158	4,4-Methylene-bis-(2-chloroaniline)
K085	Distillation of fractionation column bottoms from the production of chlorobenzenes	P054	Ethylenimine	*U060	DDD	U159	Methyl ethyl ketone
K097	Vacuum stripper discharge from the chlor-dane chlorinator in the production of chlor-dane	P057	Fluoroacetamide	*U061	DDT	U161	Methyl isobutyl ketone (I)
K098	Untreated process wastewater from the production of toxaphene	*P059	Heptachlor	U062	Diallate	U162	Methyl methacrylate (I,T)
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes	*P060	Isodrin	U063	Dibenz[a,h]anthracene	U163	N-Methyl-N'-nitro-N-nitrosoguanidine
K106	Wastewater treatment sludge from the mercury cell process in chlorine production	P066	Methomyl	U064	Dibenz[a,i]pyrene	U164	Methylthiouracil
<b>261.33 (f) Wastes - Toxic</b>		P067	2-Methylaziridine	*U066	1,2-Dibromo-3-chloropropane	U165	Naphthalene
		P068	Methyl Hydrazine	U067	Ethylene dibromide	U168	2-Naphthylamine
		P069	2-Methylacetonitrile	*U070	O-Dichlorobenzene	U169	Nitrobenzene (I,T)
		P070	Aldicarb	*U073	Dichlorobenzidine, 3,3-	U170	p-Nitrophenol
		P072	alpha-Naphthylthiourea	U074	1,4-Dichloro-2-butene	U171	2-Nitropropane
		P082	N-Nitrosodimethylamine	U077	Ethane, 1,2-dichloro	U172	N-Nitrosodi-n-butylamine
		P084	N-Nitrosomethylvinylamine	*U078	1,1-Dichloroethylene	U173	N-Nitrosodiethanolamine
		P102	Propargyl alcohol	*U080	Methylene chloride	U174	N-Nitrosodiethylamine
		P108	Strychnine and salts	*U083	Dichloropropane, 1,2-	U176	N-Nitroso-N-ethylurea
		P110	Tetraethyl lead	U086	N,N-Diethylhydrazine	U177	N-Nitroso-N-methylurea
		P112	Tetranitromethane (R)	U089	Diethylstilbestrol	U178	N-Nitroso-N-methylurethane
		*P123	Toxaphene	U092	Dimethylamine (I)	U179	N-Nitrosopiperidine
				U093	Dimethylaminoazobenzene	U180	N-Nitrosopyrrolidine
				U094	7,12-Dimethylbenz[a]anthracene	*U185	Pentachloronitrobenzene
		U002	Acetone (I)	U095	3,3'-Dimethylbenzidine	U188	Phenol
		U003	Acetonitrile (I,T)	U097	Dimethylcarbamoyl chloride	U189	Phosphorous sulfide (R)
		U005	2-Acetylaminofluorene	U098	1,1-Dimethylhydrazine	*U192	Pronamide
		U007	Acrylamide	U099	1,2-Dimethylhydrazine	U193	1,2-Oxathiolane, 2,2-dioxide
		U008	Acrylic acid (I)	U101	2,4-Dimethylphenol	U196	Pyridine
		U009	Acrylonitrile	U103	Dimethyl sulfate	U200	Reserpine
		U010	Mitomycin C	U105	2,4-Dinitrotoluene	U203	Benzene, 1,2-methylenedioxy-4-allyl-
		U011	Amitrole	U106	2,6-Dinitrotoluene	U206	Streptozotocin
		U012	Aniline	U108	1,4-Diethyleneoxide	*U208	Tetrachloroethane, 1,1,1,2-
		U014	Auramine	U109	1,2-Diphenylhydrazine	*U209	1,1,2,2-Tetrachloroethane
		U015	Azaserine	U110	Dipropylamine (I)	*U210	Tetrachloroethylene
		U016	3,4-Benzacridine	U111	Di-N-propylnitrosamine	*U211	Carbon tetrachloride
		U018	Benz(a)anthracene	U114	1,2-Ethanedithiolbis(carbamodithioic acid	U213	Tetrahydrofuran (I)
		U019	Benzene	U115	Ethylene oxide	U218	Thioacetamide
		U021	Benzidine	U116	2-Imidazolidinethione	U219	Thiourea
		U022	Benzo(a)pyrene	U119	Ethyl methanesulfonate	U220	Toluene
		U023	Benzene, (trichloromethyl)-(C,R,T)	U122	Formaldehyde	*U226	Methylchloroform
		U025	Dichloroethyl ether	U124	Furan (I)	*U227	1,1,2-Trichloroethane
		U026	Chloromaphazine	*U127	Hexachlorobenzene	*U228	Trichloroethylene
		U029	Methyl bromide	*U128	Hexachlorobutadiene	*U237	Uracil mustard
		U031	n-Butanol	*U129	Lindane	U238	Ethyl carbamate
		U035	Chlorambucil	*U130	Hexachlorocyclopentadiene	U239	Xylene (I)
		*U036	Chlordane technical	*U131	Hexachlorethane	U244	Bis(dimethylthiocarbamoyl) disulfide
		*U037	Chlorobenzene	U137	Indeno[1,2,3cd]pyrene		
<b>261.33 (e) Wastes - Acute Hazardous</b>							
P001	Warfarin, when present at concentration greater than 0.3%						
P002	1-Acetyl-2-thiourea						
P003	Acrolein						
*P004	Aldrin						
P005	Allyl alcohol						
P007	5-(Aminomethyl)-3-isoxazolo						
P008	4-aAminopyridine						
P010	Arsenic acid						
P011	Arsenic (V) oxide						
P012	Arsenic (III) oxide						

\* "These soft hammer waste codes are likely to be California Listed Waste. They would then only require a California "Waste Specific Prohibition" and not a Soft Hammer Demonstration and Certification."

# TABLE IV

## TREATMENT STANDARD EXPRESSED AS INCINERATION

The following wastes are subject to the technology based treatment standard "Incineration." These wastes may be incinerated without imposing a performance based standard that requires analysis.

K027	nonwastewaters	P040	nonwastewaters	P109	nonwastewaters
K039	nonwastewaters	P041	nonwastewaters	P111	nonwastewaters
K113	nonwastewaters	P043	nonwastewaters	U059	nonwastewaters
K114	nonwastewaters	P044	nonwastewaters	U087	nonwastewaters
K115	nonwastewaters	P062	nonwastewaters	U221	nonwastewaters
K116	nonwastewaters	P085	nonwastewaters	U223	nonwastewaters

## ADDENDUM

### Incineration Expressed as Best Demonstrated Available Technology

As of June 8, 1989, incineration has been declared the Best Demonstrated Available Technology for treatment of the following restricted wastes. If your waste is classified as any of those listed below, refer to the "Restricted Waste Notification" section on the front page of this form and to Table I.

F010	nonwastewaters	K038	nonwastewaters	P094	nonwastewaters
F024		K040	nonwastewaters	P097	nonwastewaters
K009	nonwastewaters	K043	nonwastewaters	U028	
K101	nonwastewaters	K093		U069	
K011	nonwastewaters	K094		U088	
K013	nonwastewaters	K095	nonwastewaters	U102	
K014	nonwastewaters	K096	nonwastewaters	U107	
K023	nonwastewaters	P039	nonwastewaters	U190	
K028		P071	nonwastewaters	U235	
K029	nonwastewaters	P089	nonwastewaters		

# ***ThermalKEM***



For more information contact the regional sales office in your area:

### **Midwest**

Southfield, Michigan  
(313) 353-5880

### **Southeast**

Rock Hill, South Carolina  
(803) 329-9690

### **Northeast**

Mahwah, New Jersey  
(201) 818-0900